



SEQUENCE LISTING

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<120> Leucine-based motif and clostridial neurotoxins

<130> D-2885CIP

<150> US 09/620,840

<151> 2000-07-21

<160> 20

<170> PatentIn version 3.1

<210> 1

<211> 7

<212> PRT

<213> Artificial

<220>

<221> MISC_FEATURE

<222> (1)..(5)

<223> Description of Artificial Sequence: fragment having properties substantially similar to that of leucine based sequence
x may be any amino acid or derivatives thereof

<400> 1

Xaa Asp Xaa Xaa Xaa Leu Leu
1 5

<210> 2

<211> 7

<212> PRT

<213> Artificial

<220>

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<222> (1)..(5)

<223> Description of Artificial Sequence: fragment having properties

ies
su

bstantially similar to leucine based motif
x may be any amino acid or derivatives thereof

<400> 2

Xaa Glu Xaa Xaa Xaa Leu Leu
1 5

<210> 3
<211> 7
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<213> Artificial

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su
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<220>
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<400> 3

Xaa Asp Xaa Xaa Xaa Leu Ile
1 5

<210> 4
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su

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<400> 4

Xaa Asp Xaa Xaa Xaa Leu Met
1 5

<210> 5

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<221> MISC_FEATURE
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<223> Description of Unknown Organism: This fragment may have come
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a rat source.

<220>
<221> MISC_FEATURE
<222> (1)..(5)
<223> X may be any amino acid or derivatives thereof

<400> 6

Xaa Glu Xaa Xaa Xaa Leu Met
1 5

<210> 7
<211> 7
<212> PRT
<213> Unknown

<220>
<223> Description of Unknown Organism: This fragment may have come
from
a rat source.

<400> 7

Phe Glu Phe Tyr Lys Leu Leu
1 5

<210> 8
<211> 7
<212> PRT
<213> rat

<400> 8

Glu Glu Lys Arg Ala Ile Leu
1 5

<210> 9
<211> 7
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Glu Glu Lys Met Ala Ile Leu
1 5

<210> 10
<211> 7
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Ser Glu Arg Asp Val Leu Leu
1 5

<210> 11
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<400> 11

Val Asp Thr Gln Val Leu Leu
1 5

<210> 12
<211> 7
<212> PRT
<213> mouse

<400> 12

Ala Glu Val Gln Ala Leu Leu
1 5

<210> 13
<211> 7
<212> PRT
<213> frog

<400> 13

Ser Asp Lys Gln Asn Leu Leu
1 5

<210> 14

<211> 7

<212> PRT

<213> chicken

<400> 14

Ser Asp Arg Gln Asn Leu Ile
1 5

<210> 15

<211> 7

<212> PRT

<213> sheep

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Ala Asp Thr Gln Val Leu Met
1 5

<210> 16

<211> 7

<212> PRT

<213> Homo sapiens

<400> 16

Ser Asp Lys Gln Thr Leu Leu
1 5

<210> 17

<211> 7

<212> PRT

<213> Homo sapiens

<400> 17

Ser Gln Ile Lys Arg Leu Leu

1 5

<210> 18
 <211> 7
 <212> PRT
 <213> Homo sapiens

<400> 18

Ala Asp Thr Gln Ala Leu Leu
 1 5

<210> 19
 <211> 437
 <212> PRT
 <213> Clostridium botulinum

<400> 19

Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly Val
 1 5 10 15

Asp Ile Ala Tyr Ile Lys Ile Pro Asn Val Gly Gln Met Gln Pro Val
 20 25 30

Lys Ala Phe Lys Ile His Asn Lys Ile Trp Val Ile Pro Glu Arg Asp
 35 40 45

Thr Phe Thr Asn Pro Glu Glu Gly Asp Leu Asn Pro Pro Pro Glu Ala
 50 55 60

Lys Gln Val Pro Val Ser Tyr Tyr Asp Ser Thr Tyr Leu Ser Thr Asp
 65 70 75 80

Asn Glu Lys Asp Asn Tyr Leu Lys Gly Val Thr Lys Leu Phe Glu Arg
 85 90 95

Ile Tyr Ser Thr Asp Leu Gly Arg Met Leu Leu Thr Ser Ile Val Arg
 100 105 110

Gly Ile Pro Phe Trp Gly Gly Ser Thr Ile Asp Thr Glu Leu Lys Val
 115 120 125

Ile Asp Thr Asn Cys Ile Asn Val Ile Gln Pro Asp Gly Ser Tyr Arg
 130 135 140

Ser Glu Glu Leu Asn Leu Val Ile Ile Gly Pro Ser Ala Asp Ile Ile
 145 150 155 160

Gln Phe Glu Cys Lys Ser Phe Gly His Glu Val Leu Asn Leu Thr Arg
 165 170 175

Asn Gly Tyr Gly Ser Thr Gln Tyr Ile Arg Phe Ser Pro Asp Phe Thr
 180 185 190

Phe Gly Phe Glu Glu Ser Leu Glu Val Asp Thr Asn Pro Leu Leu Gly
 195 200 205

Ala Gly Lys Phe Ala Thr Asp Pro Ala Val Thr Leu Ala His Glu Leu
 210 215 220

Ile His Ala Gly His Arg Leu Tyr Gly Ile Ala Ile Asn Pro Asn Arg
 225 230 235 240

Val Phe Lys Val Asn Thr Asn Ala Tyr Tyr Glu Met Ser Gly Leu Glu
 245 250 255

Val Ser Phe Glu Glu Leu Arg Thr Phe Gly Gly His Asp Ala Lys Phe
 260 265 270

Ile Asp Ser Leu Gln Glu Asn Glu Phe Arg Leu Tyr Tyr Tyr Asn Lys
 275 280 285

Phe Lys Asp Ile Ala Ser Thr Leu Asn Lys Ala Lys Ser Ile Val Gly
 290 295 300

Thr Thr Ala Ser Leu Gln Tyr Met Lys Asn Val Phe Lys Glu Lys Tyr
305 310 315 320

Leu Leu Ser Glu Asp Thr Ser Gly Lys Phe Ser Val Asp Lys Leu Lys
325 330 335

Phe Asp Lys Leu Tyr Lys Met Leu Thr Glu Ile Tyr Thr Glu Asp Asn
340 345 350

Phe Val Lys Phe Phe Lys Val Leu Asn Arg Lys Thr Tyr Leu Asn Phe
355 360 365

Asp Lys Ala Val Phe Lys Ile Asn Ile Val Pro Lys Val Asn Tyr Thr
370 375 380

Ile Tyr Asp Gly Phe Asn Leu Arg Asn Thr Asn Leu Ala Ala Asn Phe
385 390 395 400

Asn Gly Gln Asn Thr Glu Ile Asn Asn Met Asn Phe Thr Lys Leu Lys
405 410 415

Asn Phe Thr Gly Leu Phe Glu Phe Tyr Lys Leu Leu Cys Val Arg Gly
420 425 430

Ile Ile Thr Ser Lys
435

<210> 20
<211> 441
<212> PRT
<213> Clostridium botulinum

<400> 20

Met Pro Val Thr Ile Asn Asn Phe Asn Tyr Asn Asp Pro Ile Asp Asn
1 5 10 15

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Asn Asn Ile Ile Met Met Glu Pro Pro Phe Ala Arg Gly Thr Gly Arg
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Tyr Tyr Lys Ala Phe Lys Ile Thr Asp Arg Ile Trp Ile Ile Pro Glu
      35                      40                      45

Arg Tyr Thr Phe Gly Tyr Lys Pro Glu Asp Phe Asn Lys Ser Ser Gly
      50                      55                      60

Ile Phe Asn Arg Asp Val Cys Glu Tyr Tyr Asp Pro Asp Tyr Leu Asn
      65                      70                      75                      80

Thr Asn Asp Lys Lys Asn Ile Phe Leu Gln Thr Met Ile Lys Leu Phe
      85                      90                      95

Asn Arg Ile Lys Ser Lys Pro Leu Gly Glu Lys Leu Leu Glu Met Ile
      100                     105                     110

Ile Asn Gly Ile Pro Tyr Leu Gly Asp Arg Arg Val Pro Leu Glu Glu
      115                     120                     125

Phe Asn Thr Asn Ile Ala Ser Val Thr Val Asn Lys Leu Ile Ser Asn
      130                     135                     140

Pro Gly Glu Val Glu Arg Lys Lys Gly Ile Phe Ala Asn Leu Ile Ile
      145                     150                     155                     160

Phe Gly Pro Gly Pro Val Leu Asn Glu Asn Glu Thr Ile Asp Ile Gly
      165                     170                     175

Ile Gln Asn His Phe Ala Ser Arg Glu Gly Phe Gly Gly Ile Met Gln
      180                     185                     190

Met Lys Phe Cys Pro Glu Tyr Val Ser Val Phe Asn Asn Val Gln Glu
      195                     200                     205

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Asn	Lys	Gly	Ala	Ser	Ile	Phe	Asn	Arg	Arg	Gly	Tyr	Phe	Ser	Asp	Pro
210						215					220				
Ala	Leu	Ile	Leu	Met	His	Glu	Leu	Ile	His	Val	Leu	His	Gly	Leu	Tyr
225					230					235					240
Gly	Ile	Lys	Val	Asp	Asp	Leu	Pro	Ile	Val	Pro	Asn	Glu	Lys	Lys	Phe
				245					250					255	
Phe	Met	Gln	Ser	Thr	Asp	Ala	Ile	Gln	Ala	Glu	Glu	Leu	Tyr	Thr	Phe
			260					265					270		
Gly	Gly	Gln	Asp	Pro	Ser	Ile	Ile	Thr	Pro	Ser	Thr	Asp	Lys	Ser	Ile
		275					280					285			
Tyr	Asp	Lys	Val	Leu	Gln	Asn	Phe	Arg	Gly	Ile	Val	Asp	Arg	Leu	Asn
290						295					300				
Lys	Val	Leu	Val	Cys	Ile	Ser	Asp	Pro	Asn	Ile	Asn	Ile	Asn	Ile	Tyr
305					310					315					320
Lys	Asn	Lys	Phe	Lys	Asp	Lys	Tyr	Lys	Phe	Val	Glu	Asp	Ser	Glu	Gly
				325					330					335	
Lys	Tyr	Ser	Ile	Asp	Val	Glu	Ser	Phe	Asp	Lys	Leu	Tyr	Lys	Ser	Leu
			340					345					350		
Met	Phe	Gly	Phe	Thr	Glu	Thr	Asn	Ile	Ala	Glu	Asn	Tyr	Lys	Ile	Lys
		355					360					365			
Thr	Arg	Ala	Ser	Tyr	Phe	Ser	Asp	Ser	Leu	Pro	Pro	Val	Lys	Ile	Lys
	370					375					380				
Asn	Leu	Leu	Asp	Asn	Glu	Ile	Tyr	Thr	Ile	Glu	Glu	Gly	Phe	Asn	Ile
385					390					395					400

Ser Asp Lys Asp Met Glu Lys Glu Tyr Arg Gly Gln Asn Lys Ala Ile
405 410 415

Asn Lys Gln Ala Tyr Glu Glu Ile Ser Lys Glu His Leu Ala Val Tyr
420 425 430

Lys Ile Gln Met Cys Lys Ser Val Lys
435 440